

March 14, 2004

Express Mail Label No.: ER496088183US

PATENT

UNITED STATES PATENT APPLICATION

of

INVENTOR: RALPH S. NORMAN
A Citizen of the United States
290 A Trousdale Drive
CHULA VISTA, CALIFORNIA 91910

for

IMPROVED FLUIDIC DAMPENING DEVICE

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] This invention relates to a device that uses a fluid to dampen a force that tends to move the plane of rotation of a steerable wheel or wheels of a vehicle having a shaft used to steer such wheel or wheels away from being generally parallel to the frame of such vehicle. It also relates to any steering device, such as a ski of a snowmobile or the exhaust jet of a personal watercraft, that uses a shaft or the like in the steering process.

DESCRIPTION OF THE RELATED ART

[0002] Dampening devices of the type subject to the present invention are those which contain a rotatable wiper in a housing having a channel running from a portion of the housing on a first side of the wiper to a portion of the housing on a second side of the wiper so that when the housing is filled with fluid, as the wiper is moved, it forces fluid through the channel.

[0003] Examples of such devices are those of United States patent no. 4,773,514 and United States patent application serial no. 10/166,498.

[0004] Although a dissimilar type of dampener seems to be shown in United States patent no. 5,516,133 as being below a portion of the handlebars of a bicycle, the present inventor is unaware of any dampener of the type with the rotatable wiper and housing with a channel that is mounted below the handlebars.

BRIEF SUMMARY OF THE INVENTION

[0005] The present Improved Fluidic Dampening Device has a first clamp near a first side of a housing containing a wiper and a channel for transferring fluid from a first side of the wiper to a second side of the wiper as well as a second clamp near a second side of the housing.

[0006] Each clamp has an upper section which is releasably fastenable to the handlebars of a vehicle. Thus, the housing is suspended below the handlebars, decreasing the likelihood of the face of a rider striking the housing when the vehicle is jarred.

[0007] Preferably, the clamps can also be attached to the top of a triple clamp, which is a device with two deformable apertures that can be squeezed together with a bolt to hold the triple clamp to each of the forks going down on opposite sides of the wheel of a motorcycle and with

a third aperture to accommodate the post about which the forks rotate in order to turn the front wheel of the motorcycles.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

- [0008] FIG. 1 provides a lateral view from the rear of the Improved Fluidic Dampening Device.
- [0010] FIG. 2 shows a front view of the Improved Fluidic Dampening Device.
- [0011] FIG. 3 is a lateral view from the left side of the Improved Fluidic Dampening Device.
- [0012] FIG. 4 is a lateral view from the right side of the Improved Fluidic Dampening Device.
- [0013] FIG. 5 is a plan view from above the Improved Fluidic Dampening Device.
- [0014] FIG. 6 shows the bottom of the Improved Fluidic Dampening Device.
- [0015] FIG. 7 illustrates the Improved Fluidic Dampening Device attached to a triple clamp.

DETAILED DESCRIPTION OF THE INVENTION

[0016] The present Improved Fluidic Dampening Device has, as seen in FIG. 1 and FIG. 2, a first clamp **100** attached near the left side **101** of a housing **1** containing a bypass channel **9** having a first port **10** in a first side wall **3** and a second port **11** in the second side wall **4**. A wiper **7** is rotatably mounted between the side wall **3, 4**.

[0017] More fully to describe an illustrative example of the type of dampening device supported by the clamp **100**, United States patent application serial no. 10/166,498 is hereby incorporated by reference.

[0018] A second clamp **102** is, as seen in FIG. 1 and FIG. 2, attached near the right side **103** of the housing **1**.

[0019] An upper segment **104** of the first clamp **100**, seen in FIG. 3, is releasably attached to a lower segment **105** of the first clamp **100**, although a first end **106** of the upper segment **104** can be rotatably attached to the lower segment **105** while a second end **107** of the upper segment **104** is releasably attached to the lower segment **105**, so as to create an aperture **108** to accommodate handlebars. Releasable attachment is preferably accomplished with one or more screws **109**.

[0020] Similarly, an upper segment 110 of the second clamp 102, seen in FIG. 4, is releasably attached to a lower segment 111 of the second clamp 102, although a first end 112 of the upper segment 110 can be rotatably attached to the lower segment 111 while a second end 113 of the upper segment 110 is releasably attached to the lower segment 111, so as to create an aperture 114 to accommodate handlebars.

[0021] Preferably, the lower segments 105, 111 are releasably attached to the top 115 of a triple clamp 116, as illustrated in FIG. 7, for added support.

[0022] As used herein the term “preferable” or “preferably” means that a specified element or technique is more acceptable than another but not that such specified element or technique is a necessity.